FIG. 1

```
                    ┌──────────────────────────────┐
                    │ ABSENCE OF DEPENDENCY        │
                    │ ON EXTERNAL CODES(TYPE1)     │
                    └──────────────────────────────┘
                                   │
┌──────────────────────────────┐  │
│ EXISTENCE OF SEPARATE        │──┤
│ DECRYPTION FUNCTIONS         │  │
└──────────────────────────────┘  │
         │                         │
         │          ┌──────────────────────────────┐
         │          │ EXISTENCE OF DEPENDENCY      │
         │          │ ON EXTERNAL CODES(TYPE2)     │
         │          └──────────────────────────────┘
┌──────────────────────────────┐
│ ENCRYPTION METHOD            │
│ FOR MALICIOUS SCRIPTS        │
└──────────────────────────────┘
         │
┌──────────────────────────────┐
│ ABSENCE OF SEPARATE          │
│ DECRYPTION FUNCTIONS(TYPE3)  │
└──────────────────────────────┘
```
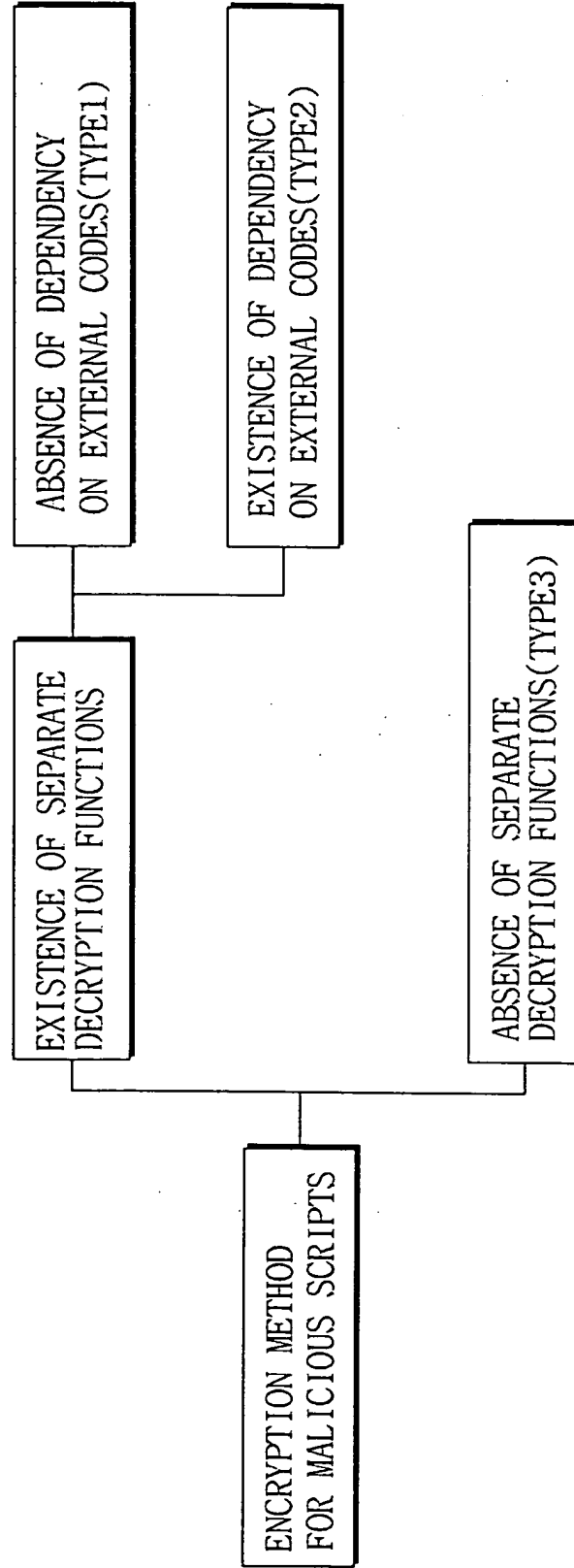
FIG. 2

```
Execute(snphhuatvsbkwuj('&Wcr/Wcrvf/H,Vnsl/@w ...... doelgtobuhno'))

Function snphhuatvsbkwuj(zwbyjntbpmhqqgh)
    For vvpzxfszgnczrao = 1 To Len(zwbyjntbpmhqqgh)
        ccuhbhjhyzkheeq = Mid(zwbyjntbpmhqqgh, vvpzxfszgnczrao, 1)
        If Asc(ccuhbhjhyzkheeq) = 7 Then
            ccuhbhjhyzkheeq =Chr(34)
        End If
        If Asc(ccuhbhjhyzkheeq) <> 35 and Asc(ccuhbhjhyzkheeq) <> 34 Then
            If Asc(ccuhbhjhyzkheeq) Mod 2 = 0 Then
                ccuhbhjhyzkheeq = Chr(Asc(ccuhbhjhyzkheeq) + 1)
            Else
                ccuhbhjhyzkheeq = Chr(Asc(ccuhbhjhyzkheeq) - 1)
            End If
        End If
        snphhuatvsbkwuj = snphhuatvsbkwuj & ccuhbhjhyzkheeq
    Next
End Function
```

FIG. 3

```
...
Set Roy = Maggie.CreateTextFile(Maggie.BuildPath(Maggie.GetSpecialFolder(2),V('7594E44554D405E2458545')),True)
Roy.WriteLine(V('E402') & Maggie.BuildPath(Maggie.GetSpecialFolder(2),V('7594E44554D405E245D405')))
Roy.WriteLine('E 0100' & H('4D5AE70163000100060024O6FFFF5F0C'))
Roy.WriteLine('E 0110' & H('000200000001F0FF5700000001325048'))
...

...
Function V(Van)
    For Kirk = 1 To Len(Van) Step 2
        V = V & Chr('&h' & Mid(Van,Kirk + 1,1) & Mid(Van,Kirk,1))
    Next
End Function

Function H(Houten)
    For Luann = 1 To Len(Houten) Step 2
        H = H & ' ' & Mid(Houten,Luann,2)
    Next
End Function
```

FIG. 4

| EXTRACT INDEPENDENT FUNCTION CALL EXPRESSIONS AND DEFINITIONS | S410 |

↓

| EXECUTE OR EMULATE THE EXTRACTED CALL EXPRESSIONS AND DEFINITIONS | S420 |

↓

| SUBSTITUTE RESULT VALUES PRODUCED BY THE EXECUTION OR EMULATION FOR VARIABLES OF AN ORIGINAL SCRIPT | S430 |

↓

| OBTAIN A DECRYPTED SCRIPT | S440 |

FIG. 5

```
Output file open    Set FSO = CreateObject("Scripting.FileSystemObject")
                    Set Decrypt = FSO.CreateTextFile("result.txt",True)

                    ...
Independent         Decrypt.WriteLine 23 & ' ' & 90 & ' ' & 31 & ' ' & 3264 & ' ' & RunFunc (v ( "7594E44554D40513E2241445" ) )
function call       Decrypt.WriteLine 24 & ' ' & 21 & ' ' & 25 & ' ' & 3264 & ' ' & RunFunc (v ( "04563686F602F66666" ) )
                    ...

Output file close   Decrypt.close

                    Function V(Van)
Independent         ...
function            End Function
definition          Function H(Houten)

                    ...
                    End Function

                    Function RunFunc(para)
                    retValue = para
                    retType = VarType(retValue)
                    If (retType >= 2 and retType <=6) or retType = 11 or retType = 17 Then
                        RunFunc = Len(CStr(retValue)) ,
                    ElseIf retType = 7 Then
                        retValue = '#' & retValue & '#'
                        RunFunc = Len(CStr(retValue))
Type handling       ElseIf retType = 8 Then
function                retValue = Chr(34) & retValue & Chr(34)
definition              RunFunc = Len(CStr(retValue))
                    Else
                        RunFunc = '0'
                    End If
                    If RunFunc <> '0' Then
                        RunFunc = Runfunc & ' ' & retValue
                    End If
                    End Function
```
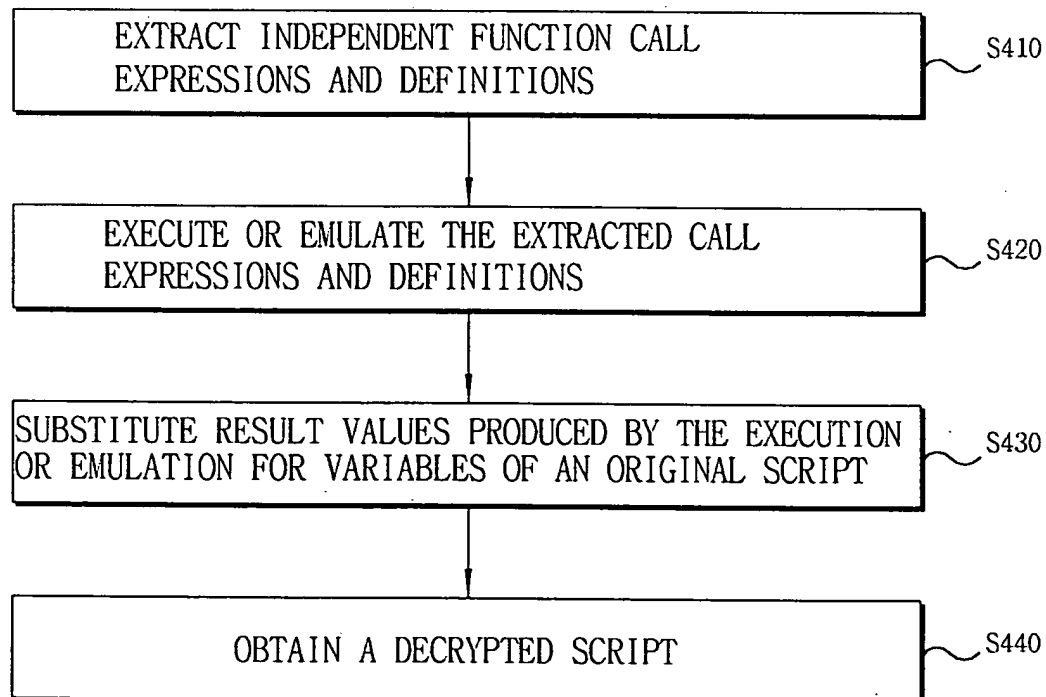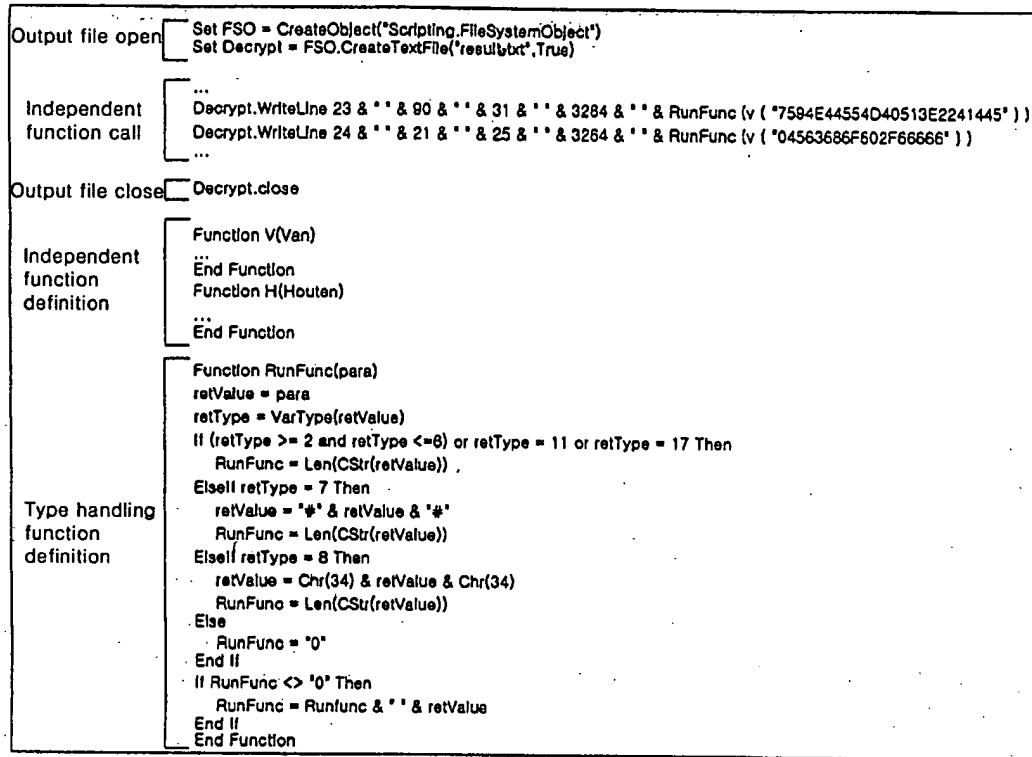
FIG. 6

```
 original_expr              return_value
row  col  len  funcID   len      string
 22   28   59  3264     28  'Scripting.FileSystemObject'
 23   90   31  3264     14  'WINTEMP1.BAT'
 24   21   25  3264     11  '@echo off'
 25   21   29  3264     13  'debug.exe <'
 25  105   29  3264     13  'WINTEMP.TXT'
 25  140   17  3264      7  ' >nul'
```

FIG. 7

```
...
set maggie = createobject ("Scripting.FileSystemObject")
set marjorie = maggie.createtextfile(maggie.buildpath(maggie.getspecialfolder(2), "WINTEMP1.BAT")), true)
marjorie.writeline("@echo off")
marjorie.writeline("debug.exe <" & maggie.buildpath(maggie.getspecialfolder(2), "WINTEMP.TXT") & " >nul")
marjorie.close
set roy = maggie.createtextfile(maggie.buildpath(maggie.getspecialfolder(2), "WINTEMP.TXT"), true)
roy.writeline("N " & maggie.buildpath(maggie.getspecialfolder(2), "WINTEMP.TMP"))
...
```